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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/087,566	03/01/2002	Masahiro Furo	134.142	3943

7590 06/07/2005

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EXAMINER
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XU, LING X

ART UNIT	PAPER NUMBER
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1775

DATE MAILED: 06/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/087,566

Applicant(s)

FURO ET AL.

Examiner

Ling X. Xu

Art Unit

1775

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 March 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 25-72 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 25-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 25 and 36 stand rejected under 35 U.S.C. 102(e) as being anticipated by Copetti et al. (US 2001/0017770) for the reasons set forth in the Office action dated 11/1/2004.

### ***Claim Rejections - 35 USC § 103***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 25-28, 30-32 and 35-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ning et al. (US 5,965,193) in view of Boutin et al (US 4,222,774) for the reasons set forth in the Office action dated 11/1/2004.

3. Claims 29 and 33-34 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Ning and Boutin, as applied to claims 25-28, 30-32 and 35-36 above, and further in view of Auran et al. (US 6,153,025) for the reasons set forth in the Office action dated 11/1/2004.

4. Claims 49-52, 54-56 and 59-60 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hiyoshi et al. (US 6,297,549) in view of Ning et al and Boutin et al for the reasons set forth in the Office action dated 11/1/2004.

Art Unit: 1775

5. Claims 53 and 57-58 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hiyoshi, Ning and Boutin, as applied to claims 49-52, 54-56 and 59-60 above, and further in view of Auran et al. (US 6,153,025) for the reasons set forth in the Office action dated 11/1/2004.

6. Claims 37-40, 42-44, 47-48, 61-68 and 71-72 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 6,122,170) in view of Boutin et al (US 4,222,774) for the reasons set forth in the Office action dated 11/1/2004.

7. Claims 41, 45-46, 65 and 69-70 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose and Boutin, as applied to claims 37-40, 42-44, 47-48, 61-68 and 71-72 above, and further in view of Auran et al. (US 6,153,025) for the reasons set forth in the Office action dated 11/1/2004.

### ***Response to Arguments***

8. Applicant's arguments filed 9/20/2004 have been fully considered but they are not persuasive.

Applicant argues that the Vickers hardness of an alloy or material may vary according to the process of hardening even if the compositions are the same. Applicant also submitted two references as evidence to show that a Vickers hardness may vary according to a process of hardening a material.

The data shown in the references submitted are insufficient to overcome the rejections made in the prior Office action. The processes disclosed in the references submitted on Table 4.1 are not the same process disclosed in the present application nor the same process disclosed in the cited prior arts. The alloy composition disclosed in the references submitted on Table 1 does not comprise the same composition as recited in the present application, for example the present application claims that the alloy comprising silicon of no less than 0.2% and no more than 2% by weight, while the composition listed on Table 1 has silicon of not more than 0.2%. Similarly, the amounts of Mn, Mg, Cu, Zn, Ni recited in the present application are different from those listed on Table 1 in the references submitted.

Accordingly, the references submitted do not provide sufficient data to show that the process of making the alloy as disclosed in the present application produces a different alloy than that of the alloys disclosed in the cited prior arts.

In addition, the specification of the present application only recites that the Vickers hardness varies according to the composition of the alloy material, see Tables 1-5 of the present application. There is no evidence in the specification to show that the Vickers hardness of the alloy material varies according to the process of making the alloy material.

### ***Conclusion***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO


Art Unit: 1775

MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ling X. Xu whose telephone number is 571-272-1546. The examiner can normally be reached on 8:00 - 4:30 Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah D. Jones can be reached on 571-272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Ling X. Xu  
Examiner  
Art Unit 1775